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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,691	04/27/2000	Young-Hwan Lee	678-474 (P9192)	3050

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06/04/2003

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EXAMINER

BAYARD, EMMANUEL

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 06/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,691

Applicant(s)

LEE ET AL.

Examiner

Emmanuel Bayard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipate by Hiraiwa et al U.S. Patent No 4,802,174.

As per claims 1 and 5 Hiraiwa et al teaches a method for normalizing metric values in a decoder uses a plurality of metric values of a next state said each metric value having at least a survival path metric and a competition path metric value, the method comprising the steps of: branch metric calculation (see fig.1 element 14 and col.1, lines 62-64 and col.3, lines 44-63) is considered as the claimed (detecting the survival path metric values out of the metric values); detecting a minimum survival path metric value out of the detected survival path metric values (see fig.1 element 16 and col.3, lines 65-67); determining whether the detected minimum survival path metric value exceeds a threshold value (see fig.1 element 26 and col.5, lines 15-20); subtracting, when the detected minimum survival path metric value exceeds a threshold value, the minimum survival path metric value from the metric values to output normalized metric values (see fig.1 element 18 and col.5, lines 20-35 and col.8, lines 55-57).

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As per claims 2 and 4, Hiraiwa et al teaches a device for normalizing metric values in a decoder uses a plurality of metric values of a next state said each metric value having at least a survival path metric and a competition path metric value, the device comprising the steps of: ACS (see fig.1 element 20 and col.4, lines 10-25) is considered as the claimed (comparator for detecting the survival path metric values out of the metric values), detecting a minimum survival path metric value out of the detected survival path metric values, and outputting determining the minimum survival path metric value when the detected minimum survival path metric value exceeds a threshold value (see fig.1 element 26 and col.5, lines 15-20); subtracters for subtracting the minimum survival path metric value from the metric values to output normalized metric values (see fig.1 elements 17 and 18 and col.3, lines 67-col.4, lines 1-5 and col.5, lines 20-35 and col.8, lines 55-57).

As per claim 5, As per claims 1 and 5 Hiraiwa et al teaches a method for normalizing metric values in a decoder uses a plurality of metric values of a next state said each metric value having at least a survival path metric and a competition path metric value, the method comprising the steps of: branch metric calculation (see fig.1 element 14 and col.1, lines 62-64 and col.3, lines 44-63) is considered as the claimed (detecting the survival path metric values out of the metric values); detecting a minimum survival path metric value out of the detected survival path metric values (see fig.1 element 16 and col.3, lines 65-67); determining whether the detected minimum survival path metric value exceeds a threshold value (see fig.1 element 26 and col.5, lines 15-20); subtracting, when the detected minimum survival path metric value exceeds a threshold value, the minimum survival path metric value from the metric values to

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output normalized metric values (see fig.1 element 18 and col.5, lines 20-35 and col.8, lines 55-57). In addition the steps of : detecting the competition path metric values out of the metric values; detecting a minimum competition path metric value out of the detected survival path metric values; determining whether the detected minimum competition path metric value greater than a threshold value; subtracting, when the detected minimum competition path metric value is greater than a threshold value, the minimum competition path metric value from the metric values to output normalized metric values are inherently performed by Haraiwa et al since these limitations are similar to that of claim 1.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Graham et al U.S. Patent No 5,349,608 teaches a viterbi ACS with renormalization.

Oh U.S. Patent No 5,859,861 teaches a high speed viterbi decoder.

Rahrer et al U.S. Patent No 6,208,713 B1 teaches a method and apparatus for locating a desired record.

Ikeda et al U.S. Patent No 5,724,394 teaches a viterbi decoder.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Emmanuel Bayard whose telephone number is (703) 308-9573. The examiner can normally be reached on Monday-Thursday from 8:00 AM - 5:30 PM. The examiner can also be reached on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (703) 305-4378. The fax phone number for this Group is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3800.



Emmandel Bayard

Primary Examiner

May 29, 2003